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EXAMINER

DU, THUAN N

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 2185     |              |

DATE MAILED: 11/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/675,617

Applicant(s)

DUNSTAN ET AL.

Examiner

Thuan N. Du

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 6-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 12-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Applicant's election with traverse of Group I, claims 1-5 and 12-23 in Paper No. 5 is acknowledged. The traversal is on the following grounds:

(i) The inventions of Group I, claims 1-5 and 12-23, and Group II, claims 6-11, are not distinct;

(ii) Search and examination of an entire application can be made without serious burden on the examiner.

This is not found persuasive because:

a. With respect to ground (i), examiner refers to the last office action wherein the examiner precisely pointed out two distinctions between groups I and II. In group I, claims 1-5 and 12-23, the controller sets the power state [emphasis added by examiner] upon receiving a message (i.e. full wakeup, limited wakeup, resume from previous state or status request) from a subsystem. On the other hand, group II, claims 6-11, drawn to the operation of the subsystem [emphasis added by examiner] based on the command signal, from a controller, which instructs the subsystem to perform an operation (shutdown, synchronize, status request or reset).

Therefore, the inventions of groups I and II are distinct.

b. With respect to ground (ii), because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, there is a serious burden to the examiner for examining these two distinct inventions.

For all the reasons above, examiner contends that the restriction is proper.

The requirement is still deemed proper and is therefore made FINAL.

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2. Claims 6-11 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 4.
3. This application contains claims 6-11 drawn to an invention nonelected with traverse in Paper No. 4. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.
4. Claims 1-5 and 12-23 are presented for examination.

### *Specification*

5. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Applicant is herein suggested that the phrase "are described" should be removed from the abstract.

6. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claim 22 recites that the communications link having a lower bandwidth than the main system bus which is not mentioned in the specification.

***Claim Objections***

7. Claim 14 is objected to because of the following informalities: the claim recites the phrase “the subsystem to acknowledge a communication” in line 2. It is unclear whether the communication recited in claim 14 is one of the communications recited in claim 12 or some other communication. For further examination, the examiner considers “a communication” is any communication between the host/controller and the subsystem. Appropriate correction is required.

8. Claim 15 is objected to because of the following informalities: in line 2, “an power state controller” should be “a power state controller”. Appropriate correction is required.

9. Claim 20 is objected to because of the following informalities: the claim recites the phrase “the subsystem to acknowledge a communication” in line 2. It is unclear whether the communication recited in claim 20 is one of the communications recited in claim 18 or some other communication. For further examination, the examiner considers “a communication” is any communication between the host/controller and the subsystem.

Claim 20 is also objected because a period “.” for ending the claim is missing.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

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has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

11. Claims 1-3, 12, 14, 18 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Chrysanthakopoulos (U.S. Patent No. 6,446,214).

12. **Regarding claim 1**, Chrysanthakopoulos teaches a method for controlling a power state of a subsystem (peripheral devices) [peripheral device is a subsystem of a computer system] comprising the steps of:

receiving from the subsystem a message (unsolicited request is a message) [col. 4, lines 1-5]; and

setting the power state of the subsystem based on the message [col. 4, lines 9-16].

13. **Regarding claim 2**, Chrysanthakopoulos teaches the device is changed from an inactive state (power down state) to an active state (power up state) when activity resumes (the device is in normal operation state to perform activities) [col. 3, lines 17-19]. Therefore, Chrysanthakopoulos teaches the message is a full wakeup request as claimed.

14. **Regarding claim 3**, Chrysanthakopoulos acknowledging a received subsystem message by “sends any requests to the peripheral device that are warranted by the power change” in response to the power state change request sent by the peripheral device [col. 4, lines 17-21].

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15. **Regarding claim 12**, Chrysanthakopoulos teaches a storage medium having stored thereon instructions [col. 3, lines 5-6] used to perform the following:

receive input signals [col. 4, lines 3-5];

communicate with a subsystem (peripheral device is a subsystem of a computer system) [col. 4, lines 1-5 and 17-19];

determine a desired power state for the subsystem based upon received input signals and communications with the subsystem [col. 4, lines 9-16]; and

communicate to the subsystem the desired power state [col. 4, lines 27-30 and 35-36].

16. **Regarding claim 14**, Chrysanthakopoulos teaches the subsystem acknowledges a communication (command that sets the peripheral device in the desired power state) from the host [col. 4, lines 27-30 and 35-36] by changing its power state to the desired power state [col. 4, lines 37-39].

17. **Regarding claim 18**, Chrysanthakopoulos teaches an apparatus for controlling subsystem power comprising:

means for receiving input signals [col. 4, lines 3-5];

means for communicating with a subsystem (peripheral device is a subsystem of a computer system) [col. 4, lines 1-5 and 17-19];

means for determining a desired power state for the subsystem based upon received input signals and communications with the subsystem [col. 4, lines 9-16]; and

means for communicating to the subsystem the desired power state [col. 4, lines 27-30 and 35-36].

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18. **Regarding claim 20**, Chrysanthakopoulos teaches the subsystem acknowledges a communication (command that sets the peripheral device in the desired power state) from the host [col. 4, lines 27-30 and 35-36] by changing its power state to the desired power state [col. 4, lines 37-39].

***Claim Rejections - 35 USC § 103***

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chrysanthakopoulos (U.S. Patent No. 6,446,214) in view of Jones (U.S. Patent No. 5,809,311).

21. **Regarding claim 4**, Chrysanthakopoulos does not teach the message from the subsystem is received without involvement of a main operating system.

Jones teaches a management controller (260) controls other subsystems (210, 220, 240) independent from operating system [col. 4, lines 44-49]. In operation, Jones teaches the step of receiving from the subsystems message(s) indicating status of the subsystem [col. 5, lines 5-8, 22-25]. Therefore, Jones teaches the claimed method step of receiving from the subsystem a message without involvement of a main operating system.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Chrysanthakopoulos and Jones because they both teach system for controlling power in a computer system. Jones' teaching of controlling other



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subsystem by the management controller independent from operating system would increase the flexibility of Chrysanthakopoulos' system by allowing the system to have an additional controller for controlling the power of subsystem which is not required to be tracked by the operating system.

22. **Regarding claim 5**, Chrysanthakopoulos does not teach the power state of the subsystem is set without involvement of a main operating system.

Jones discloses a management controller (260) for controlling the power of other subsystems (210, 220, 240) [col. 6, lines 12-17] independent from operating system [col. 4, lines 44-49]. One of ordinary skill in the art would have recognized that controlling the power of the subsystem (delivering power to the subsystem) including the act of setting the power state (from an inactive state to an active state) of the subsystems.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Chrysanthakopoulos and Jones because they both teach system for controlling power in a computer system. Jones' teaching of controlling other subsystem by the management controller independent from operating system would increase the flexibility of Chrysanthakopoulos' system by allowing the system to have an additional controller for controlling the power of subsystem which is not required to be tracked by the operating system.

23. Claims 13 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chrysanthakopoulos (U.S. Patent No. 6,446,214) in view of Woog et al. [Woog] (U.S. Patent No. 5,630,144).

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24. **Regarding claim 13**, both Chrysanthakopoulos and Woog do not explicitly teach the input signal is a user initiated signal. Woog teaches a power management system comprising a power control system (100) which detects input signal (activity) from input device for controlling the power of a subsystem (monitor 120) accordingly [col. 6, lines 50-55]. However, one of ordinary skill in the art would have readily recognized that the activity of the input device is obviously initiated by a user (user moves a mouse or presses a key on a keyboard).

25. **Regarding claim 19**, both Chrysanthakopoulos and Woog do not explicitly teach the input signal is a user initiated signal. Woog teaches a power management system comprising a power control system (100) which detects input signal (activity) from input device for controlling the power of a subsystem (monitor 120) accordingly [col. 6, lines 50-55]. However, one of ordinary skill in the art would have readily recognized that the activity of the input device is obviously initiated by a user (user moves a mouse or presses a key on a keyboard).

26. Claims 15, 17, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woog et al. [Woog] (U.S. Patent No. 5,630,144) in view of Arai et al. [Arai] (U.S. Patent No. 5,978,922).

27. **Regarding claim 15**, Woog teaches a system comprising:

a power state controller [power control unit 150] having an input port [input port for receiving input signal from keyboard controller 130], and output port [port for outputting signal to monitor 120], and a communications channel [the line coupled between power control unit 150 and monitor 120];

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a user input [keyboard 140] coupled to the power state controller input port [keyboard 140 is coupled to power control unit 150 through the keyboard controller 130]; and

a subsystem [monitor 120] coupled to the power state controller output port and the power state controller communications channel [the monitor 120 is coupled to the power control unit 150 for receiving signal outputted from the power control unit through the line connected between the monitor and the power control unit].

Woog does not teach the system including an energy monitor signal coupled to the power state controller.

Arai teaches a power management system comprising an energy monitor signal coupled to a power controller (controller 8) input port [signal inputted to the controller 8 to indicate the remaining power in a power source].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Woog and Arai because they both teach system for controlling power in a computer system. Arai's teaching of monitoring the power level of the power source would increase the flexibility of Woog's system by allowing the power control unit of Woog can also monitor power level of power source to ensure the power source has sufficient power for providing to the subsystem.

28. **Regarding claim 17**, Woog does not teach the system including an energy monitor signal coupled to the power state controller for indicating the remaining battery capacity.

Arai teaches a power management system comprising an energy monitor signal coupled to a power controller (controller 8) input port [signal inputted to the controller 8 to indicate the

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remaining power in a power source] for indicating the remaining battery capacity [col. 5, lines 33-35].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Woog and Arai because it would increase the flexibility of the system by allowing the power control unit of Woog can also monitor power level of power source to ensure the power source has sufficient power for providing to the subsystem.

29. **Regarding claim 21**, Woog teach a computer based system (computer 50), comprising:  
an energy source (power main 160) [Fig. 1];  
a power state controller (power control unit 150) [Fig. 1];  
a subsystem (monitor 120) coupled to the power state controller [Fig. 1]; and  
a communications link coupling the power state controller to the subsystem (the line coupled between power control unit 150 and monitor 120) [Fig. 1].

Woog does not teach the system including an energy monitor coupled to the energy source and the power state controller, and providing a signal indicative of remaining energy capacity.

Arai teaches a power management system comprising a power controller which monitoring the remaining power in a power source [col. 5, lines 33-35]. Therefor, Arai obviously includes a monitoring device, either embedded within the power controller or coupled between the power source and the power controller, for monitoring the remaining power in a power source.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Woog and Arai because they both teach system for

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controlling power in a computer system. Arai's teaching of monitoring the power level of the power source would increase the flexibility of Woog's system by allowing the power control unit of Woog can also monitor power level of power source to ensure the power source has sufficient power for providing to the subsystem.

30. **Regarding claim 22**, both Woog and Arai do not explicitly disclose that the communications link coupling the power controller to the subsystem comprising a link having lower bandwidth than a main system bus in the computer system. One of ordinary skill in the art would have readily recognized that it would have been obvious at the time of the invention to use the communications link coupling the power state controller to the subsystem comprising a link having lower bandwidth than a main system bus in the computer system. One of ordinary skill in the art would have readily recognized that the amount of data exchanged on the link between the power state controller and the subsystem is far less than the amount of data exchanged on the main system bus. Therefore, using a low bandwidth communications link would reduce cost and power consumption of the computer system, which would be desirable in Woog.

31. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woog et al. [Woog] (U.S. Patent No. 5,630,144) in view of Arai et al. [Arai] (U.S. Patent No. 5,978,922) as applied to claim 15 above, and further in view of Goff et al. [Goff] (U.S. Patent No. 6,105,142).

32. **Regarding claim 16**, both Woog and Arai do not specifically teach the user input is a switch to turn the system on and off.

Goff teaches a key on a keyboard may emulate a power switch (power button).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Woog-Arai and Goff because they both teach system for controlling power in a computer system. Goff's teaching of turning the system on and off directly from a keyboard would increase the convenience of the system by allowing a key on Woog-Arai's keyboard may emulate a power switch. Therefore, user input signal sent to Woog-Arai's power controller would including power on/off signal.

33. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woog et al. [Woog] (U.S. Patent No. 5,630,144) in view of Arai et al. [Arai] (U.S. Patent No. 5,978,922) as applied to claim 21 above, and further in view of Jones (U.S. Patent No. 5,809,311).

34. **Regarding claim 23**, both Woog and Arai do not explicitly disclose that the communications link is operable without the use of a main operating system.

Jones teaches a management controller (260) controls other subsystems (through link 250) independent from operating system [col. 4, lines 44-49].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Woog-Arai and Jones because they both teach system for controlling power in a computer system. Jones' teaching of controlling other subsystem by the management controller independent from operating system would reduce the burden on the operating system by allowing the power controller and the subsystem communicate to each other independent from the operating system.

*Conclusion*

35. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan N. Du whose telephone number is (703) 308-6292 or via e-mail, **thuan.du@uspto.gov**. The examiner can normally be reached on Monday-Friday: 9:00 AM - 5:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on (703) 305-9717.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

The fax number for the organization is (703) 872-9306.

A handwritten signature in black ink, appearing to read 'Thuan N. Du', with a long horizontal flourish extending to the right.

Thuan N. Du  
November 20, 2003